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A Case Report on Management of Gingival Recession- Craft with Graft Free Gingival Autograft

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KEYWORDS

Free Gingival Autograft, Periodontal Surgery, Gingivitis, Periodontitis, Blood Supply

ABSTRACT:

The free gingival auto-graft procedure is primarily referred for children and young adults. Researchers have proved that blood supply is the single most important factor in managing all periodontal plastic surgical procedures. This blood supply should be maintained for underlying issue for all periodontal surgical procedures. For the same, several tissue grafts have been discussed by various pioneer workers in the literature. One such invention is Free Gingival Graft (FGG) which was introduced by Allen and Cohen. They harvested a palatal graft along with the marginal and the interdental tissue and utilized in periodontal surgical management. Free Gingival Autograft has been a common technique to cover denuded root surfaces, to increase the width and thickness of attached gingival and to manage chronic marginal gingivitis with periodontitis. The advantages of using a Free Gingival Autograft are high predictability and relative simplicity of technique. However, the conventional Free Gingival Autograft has few inborn limitations such as aesthetic inequality and bulky look. This case report describes clinical management of chronic marginal gingivitis with periodontitis using craft with graft-free gingival autograft.

Introduction

Periodontal plastic surgery is the branch of periodontology that is dealing principally on the correction or elimination of mucogingival issues related with lack of attached gingiva, problematic vestibule and frenum.[1-2] Different mucogingival surgical procedures are used to stop the succession of the gingival recession and to correct poor esthetic appearance. Free Gingival Autograft is one of the most experimented surgical entities in the field of periodontics. Several modifications of Free Gingival Autograft were tried in the past by different clinicians for managing various clinical scenarios.[3-6] Free Gingival Autograft was originally described by Bjorn H. The term Free Gingival Graft was first coined by Nabers JM. Since then, it has been a popular procedure to cover exposed root surfaces and other periodontal issues.[7-9] As we all know that Gingiva has a distinctive structure and characteristics in terms of its organization and blood supply. The marginal gingiva has rich horizontal anastamoses of capillaries. Therefore, it is highly recommended to use a site specific donor tissue like “gingival unit graft”. Such grafts can effectively increase their survival rate at the recipient site.[10-13] There are numerous capillaries and tiny vessels which form loops and cyclic network up to the marginal gingival. Principal gingival vessels reduce in size and increase in number as they move coronally.[14-15] Therefore considering all these interesting facts, this case report is presented hereby to describe clinical management of chronic marginal

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gingivitis with periodontitis using craft with graft-free gingival autograft.

Case Report

A 25 year old female patient reported to the department of Periodontology of the institute with the chief complaint of receding gums in the lower front tooth region since 6 months. History of present illness revealed that the patient was apparently asymptomatic 6 months back. Patient gives the history of gingival recession wrt 31 which was noticed by her only. Past medical history was non-relevant. Moreover patient has vsited any dental hospital for the first time. Intra-oral examination showed reddish brown color of gingiva (bright red wrt 31). Gingival Contour was scalloped with knife edge and consistency was firm and resilient. Gingival surface texture confirmed the presence of stippling. The gingival position was noticed to be below the level of CEJ wrt 31. Gingival size was normal with no apparent exudates. Lab investigation confirmed hemoglobin level at 12.8 gm%, RBS at 86mg/dl, bleeding time 2min 20sec and clotting time 06min 25 sec. Diagnosis was confirmed as generalized chronic marginal gingivitis with localized periodontitis wrt 31. The proposed prognosis was good. In treatment plan, no emergency treatment advised. In nonsurgical phase (phase 1), oral hygiene assessment and education was done. Supragingival and subgingival scaling and root planing was done. Accordingly upper and lower alginate impression was taken. In maintenance phase (phase 4), oral hygiene assessment and education were done along with comprehensive. Step by step clinical procedures have been illustrated in figure 1-13.

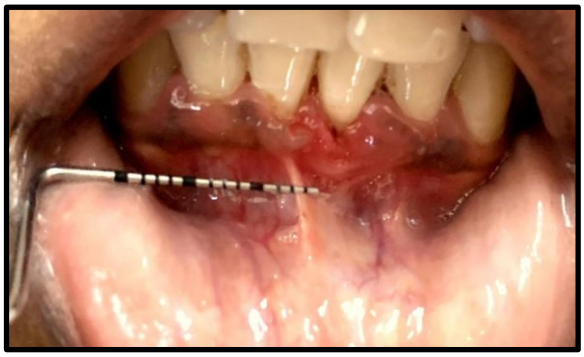

Figure 1: Aberrant frenum with an inadequate width of attached gingiva and shallow vestibule

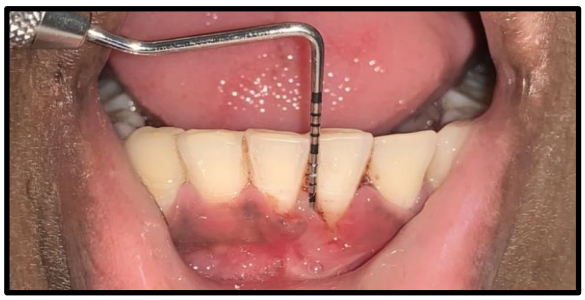

Figure 2: Probing pocket depth

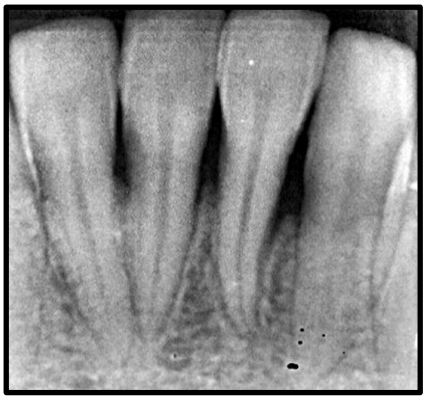

Figure 3: Radiograph confirmed the bone loss vertical: wrt to 31,41, horizontal: wrt 41

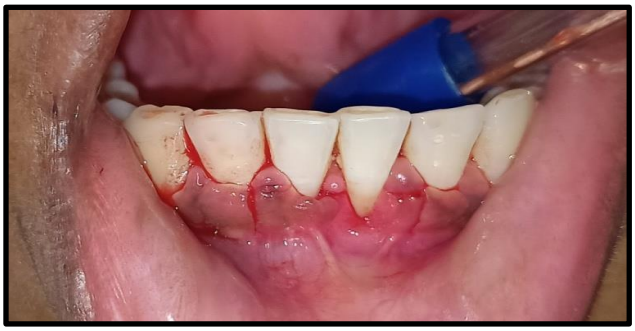

Figure 4: Incisions given

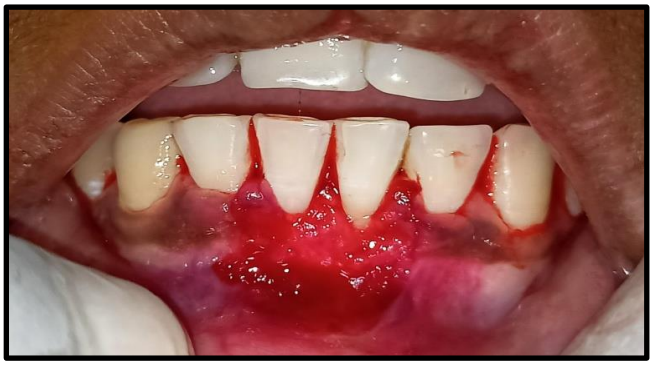

Figure 5: Recipient site prepared

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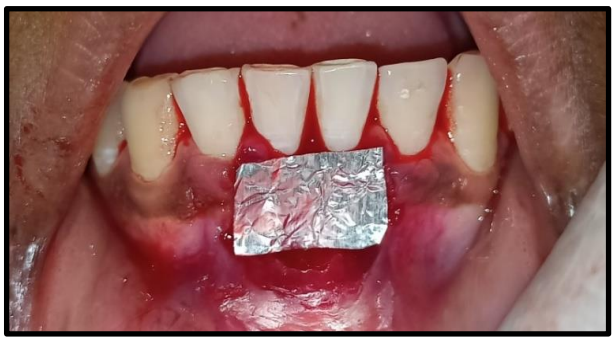

Figure 6: Tinfoil template cut to fit the recipient site

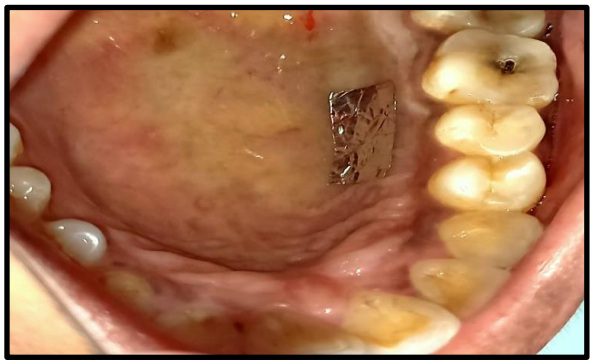

Figure 7: Tinfoil template placed at donor site

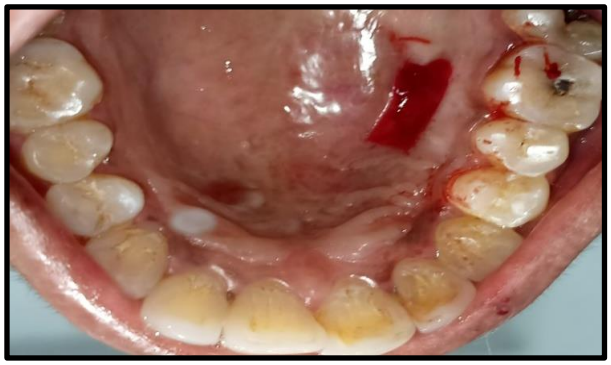

Figure 8: Palatal donor site after graft procurement

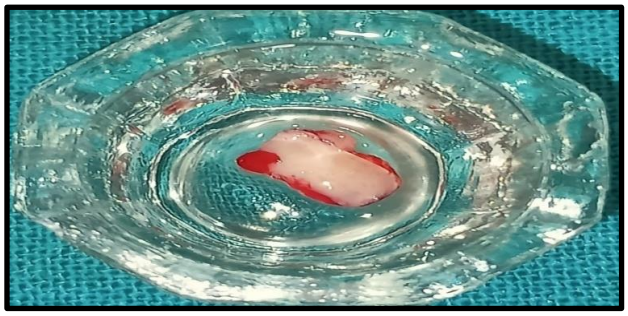

Figure 9: Free gingival autograft

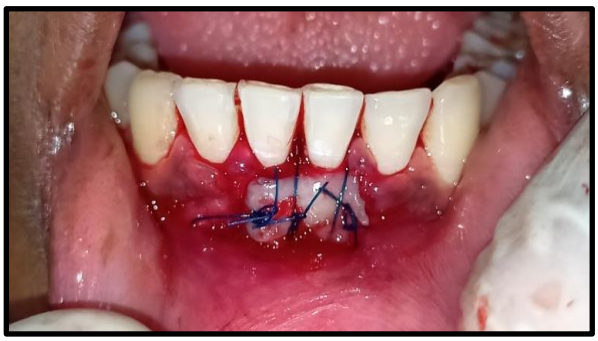

Figure 10: FGG secured with sutures

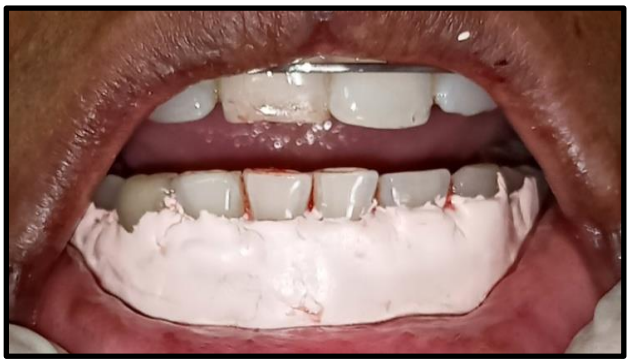

Figure 11: Periodontal dressing placed

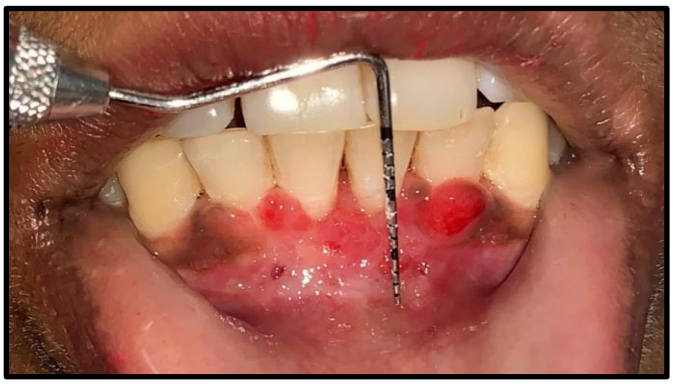

Figure 12: Healing after 15 days

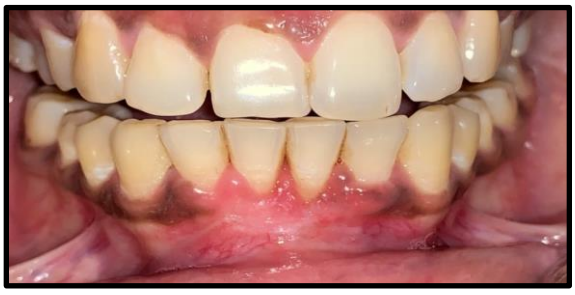

Figure 13: After 3 months adequate thickness of attached gingiva was achieved

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Conclusion

In this case report authors have demonstrated highly significant outcomes related to the usage of free gingival autografts. Successful and predictable treatment outcomes have been shown using free gingival autografts. Despite several limitations and drawbacks, the free gingival autografts is still the treatment of choice for clinical management of chronic marginal gingivitis with periodontitis. However, factors such as proper plaque control, biocompatability, careful surgical manipulation and tissue thickness can play a critical role in the long term success if mishandled at surgeons and patients end.

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